

January 23, 2004
Case No. NL 000676 (7790/313)
Serial No.: 09/995,457
Filed: November 27, 2001
Page 3 of 12

CLAIM AMENDMENTS

Claims 1-13 are currently pending in the application.

Please amend claims 1-13 as shown below.

Please add new claims 14-16 as shown below.

This listing of claims 1-16 will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A hydrogen storage material, comprising:
hydrogen; and
a magnesium-containing intermetallic compound capable of forming a hydride with the hydrogen at room temperature, ~~characterized in that~~ wherein the intermetallic compound ~~comprises~~ includes an alloy of magnesium and a trivalent metal selected from ~~the a~~ a group consisting of Sc, Y, ~~La~~, and the actinide series of rare earth elements.
2. (Currently Amended) A ~~The~~ hydrogen storage material ~~as claimed in of~~ claim 1, ~~characterized in that the intermetallic compound comprises an~~ wherein the alloy is selected from a group consisting of scandium-magnesium, ~~gadolinium-magnesium,~~ and yttrium-magnesium.
3. (Currently Amended) A ~~The~~ hydrogen storage material ~~as claimed in of~~ claim 1, ~~characterized in that the~~ wherein the intermetallic compound ~~comprises~~ includes a scandium-magnesium alloy.
4. (Currently Amended) A ~~The~~ hydrogen storage material ~~as claimed in of~~ claim 3, ~~characterized in that the scandium-magnesium alloy comprises~~ includes 1-50 at % scandium and 50-99 at. % magnesium.
5. (Currently Amended) A ~~The~~ hydrogen storage material ~~as claimed in of~~ claim 3, ~~characterized in that the scandium-magnesium alloy comprises~~ includes 15-40 at % scandium and 60-85 at. % magnesium.

January 23, 2004

Case No. NL 000676 (7790/313)

Serial No.: 09/995,457

Filed: November 27, 2001

Page 4 of 12

6. (Currently Amended) A ~~The~~ hydrogen storage material ~~as claimed in~~ of claim 3, ~~characterized in that~~ the scandium-magnesium alloy ~~comprises~~ includes 30-40 at % scandium and 60-70 at. % magnesium.

7. (Currently Amended) A ~~The~~ hydrogen storage material ~~as claimed in~~ of claim 3, ~~characterized in that~~ the scandium-magnesium alloy ~~comprises~~ includes $\text{Sc}_{0.35}\text{Mg}_{0.65}\text{H}_x$.

8. (Currently Amended) A ~~The~~ hydrogen storage material ~~as claimed in~~ of claim 1, ~~characterized in that~~ further comprising:
an amount of a catalytically active material.

9. (Currently Amended) A ~~The~~ hydrogen storage material ~~as claimed in~~ of claim 8, ~~characterized in that~~
wherein the catalytically active material ~~comprises~~ includes at least one metal selected from the a group consisting of palladium, platinum, cobalt, nickel, rhodium, or iridium, and/or a composition of the formula $\text{DE}_3[\text{,}]_i$

wherein D is at least one element selected from the a group consisting of Cr, Mo and W $[\text{,}]_j$; and

wherein E is at least one element selected from the a group consisting of Ni and Co.

10. (Currently Amended) A ~~The~~ hydrogen storage material ~~as claimed in~~ of claim 8, ~~characterized in that~~ wherein the catalytically active material ~~comprises~~ includes one of palladium, platinum or rhodium.

11. (Currently Amended) An electrochemically active material, ~~characterized in that the material comprises a hydrogen storage material as claimed in claim 1~~
comprising:

hydrogen; and

January 23, 2004
Case No. NL 000676 (7790/313)
Serial No.: 09/995,457
Filed: November 27, 2001
Page 5 of 12

a magnesium-containing intermetallic compound capable of forming a hydride with the hydrogen, wherein the intermetallic compound includes an alloy of magnesium and a trivalent metal selected from a group consisting of Sc, Y, and the actinide series of rare earth elements.

12. (Currently Amended) An electrochemical cell, at least comprising:
a positive electrode; and
a negative electrode operatively paired with said positive electrode,
~~characterized in that the negative electrode comprises a hydrogen storage material as~~
~~claimed in claim 1~~ said negative electrode including
hydrogen, and
a magnesium-containing intermetallic compound capable of forming a
hydride with the hydrogen at room temperature, wherein the intermetallic compound
includes an alloy of magnesium and a trivalent metal selected from a group consisting
of Sc, Y, and the actinide series of rare earth elements.

13. (Currently Amended) ~~An Electronic~~ electronic equipment powered by at least
one electrochemical cell, ~~characterized in that the at least one electrochemical cell is~~
~~an electrochemical cell as claimed in claim 12~~ each electrochemical cell comprising:
a positive electrode; and
a negative electrode operatively paired with said positive electrode, said
negative electrode including
hydrogen, and
a magnesium-containing intermetallic compound capable of forming a
hydride with the hydrogen at room temperature, wherein the intermetallic compound
includes an alloy of magnesium and a trivalent metal selected from a group consisting
of Sc, Y, and the actinide series of rare earth elements.

14. (New) The electrochemically active material of claim 11, further comprising:
an amount of a catalytically active material.

January 23, 2004

Case No. NL 000676 (7790/313)

Serial No.: 09/995,457

Filed: November 27, 2001

Page 6 of 12

15. (New) The electrochemical cell of claim 12, further comprising:
an amount of a catalytically active material.
16. (New) The electronic equipment of claim 13, wherein each electrochemical
cell further comprises an amount of a catalytically active material.